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CAPT. W. H. SMYTH, R. N., Vice-President, in the Chair.

The Rev. James Edmondston, of No. 63 Charrington Street, St. Pancras; the Rev. John Barton, Head Master of St. Paul's School, Southsea; and A. C. Key, Commander R. N., were balloted for, and duly elected Fellows of the Society.

DISCOVERY OF A NEW PLANET by M. Henke of Driesen.

Professor Schumacher announces the discovery of a New Planet. It is of the 9th magnitude, and its places, estimated on the Berlin maps (*Hora xvii*), are—

	R. A.	N.P.D.
July 1	10 ¹ / ₂	257° 7'
3	11 ³ / ₄	256° 40'

Mr. Hind finds at the South Villa Observatory—

July 9	10 ^h	255° 27'	94° 23'	Mag. 9.10. Estimated.
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All the above places are for the epoch 1800.

Professor Schumacher has had the goodness to forward the following observations:—

	R. A.	δ
1847. July 5 Berlin.....	10 12 7.1	256° 51' 35.4"
6 Hamburg	12 25 54.0	256° 38' 20.4"
7 Hamburg	10 46 13.5	256° 27' 51.2"

The mean times are for the place of observation. The Berlin observation was made by Professor Encke on the meridian.

Professor Challis has observed the planet with the Northumberland equatoreal as follows:—

	Greenwich M. T.	R. A.	N.P.D.
1847. July 12	11 28 38.8	17° 2 17.77	94° 54' 46.6"
13	12 34 45.4	17 1 37.61	95° 2 7.1"
14	10 44 38.1	17 1 4.30	95° 8 51.6"

The apparent place of the star of comparison on July 12 was R. A. 17^h 3^m 40^s.58, N.P.D. 94° 26' 41".7 determined on the meridian.

On July 13 and 14, the star of reference was H. C. 31168, the place taken from the catalogue.

STARFIELD.	G. M. T.	R. A.	(Mr. Lassell.)
July 13	11 15 4	255° 24' 57.5" "
	11 48 25	- 5 1 57.1"
14	10 5 42	255° 16' 23.9"
	10 21 39	- 5 8 41.8"

From the Berlin meridian observation of July 5, and two positions obtained at Mr. Bishop's Observatory on July 10 and 14, Mr. Hind has calculated the following orbit:—

Epoch of Mean Anomaly, 1847, July 0, G. M. T.	$283^{\circ} 56' 54''$
Longitude of Perihelion	$8^{\circ} 17' 24''$
Ascending Node	$137^{\circ} 25' 35''$
Inclination	$15^{\circ} 2' 56''$
Excentricity.....	0.238910
Mean Diurnal Motion	$886''\cdot0778$
Sidereal Period	4.004 years.

Ephemeris for 0^h G. M. T.

	True R. A.	True Decl.	Log Δ.
	h m s	° ' "	
July 18	16 59 6.3	- 5 35 39	0.2140
21	16 57 42.7	- 5 59 22	0.2183
24	16 56 33.9	- 6 23 58	0.2229
27	16 55 40.5	- 6 49 20	0.2279
30	16 55 2.7	- 7 15 22	0.2331

Observations of NEPTUNE.

CAMBRIDGE. (Professor Challis.)

	Greenwich M.T.	R.A.	N.P.D.
	h m s	h m s	° ' "
1847. May 26	14 58 36	22 10 36.72	101 52 33.5
June 1	14 5 4	22 10 39.86	101 52 27.0
19	13 3 16	22 10 22.84	101 54 34.3
July 13	13 24 46	22 9 3.46	102 2 34.4

On May 26 the planet was compared three times with B. A. C. 7740, and twice with star 22^h 15^m 11^s in Bessel's Zones 127 and 129: on June 1, it was compared five times with the former star, and four times with the latter. The places of the stars are taken respectively from the B. A. Catalogue, and from Bessel's Zones.

On June 19 the planet was compared twice with each of the two stars used in the former observations, using the same mean places. On July 13 the star of comparison was H. C. 43446, which is the same as that taken from Bessel's Zones 127 and 129. The assumed mean place from both authorities on Jan. 1, 1847, is R.A. 22^h 8^m 35^s.03, N. P. D. 102° 24' 5".7.

Extract of a Letter from Mr. Adams.

"I enclose the ephemeris of *Neptune* for every ten days. I am engaged in a new determination of the orbit of *Neptune* from the perturbations of *Uranus*, starting with a more correct value of the mean distance than that previously employed. At present, I have only obtained a first approximation, having neglected the eccentricity of the orbit of the disturbing body, and used the modern observations alone. The longitude of *Neptune* thus found for October 6, 1846, exceeds the true longitude by 2° 25' only.